REMARKS

I.   Office Action Summary

Claim 1-43 are pending, (of which claims 1, 16, 20, 23, 27, 31 and 39 are independent). In the Office Action mailed June 9, 2005, the Examiner rejected claims 1-40 under 35 U.S.C. 103(a). After careful review of the cited references, Applicants request favorable reconsideration in view of the following remarks.

II.   Response to Rejection of Independent Claims

Claims 1-40 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,507,856 (Chen) in view of U.S. Patent No. 6,300,947 (Kanevsky), and further in view of U.S. Patent No. 6,857,102 (Bickmore). To establish a *prima facie* case of obviousness under §103 the cited references must teach or suggest all the claim limitations. (MPEP § 2142).

A.   Claims 1, 16, 20 and 27

Applicants submit that neither Chen, Kanevsky nor Bickmore teach or suggest a system for normalizing content in a document including an automatic normalizer "for folderizing the information content, wherein the information content is organized into a set of hierarchical nodes having respective weights, where a weight determines whether a node will be inserted into a normalized document as a folder title or folder contents, and wherein the automatic normalizer folderizes the information content by identifying content having a higher visibility on a display of the originally intended device and assigning the content having the higher visibility a weight indicative of a folder title," as in claim 1 and similarly in claims 16, 20 and 27.

Neither Chen nor Kanevsky is directed toward normalizing information content in a document for display on a device other than an originally intended device, as in the present claims. In contrast, Chen teaches a system for merging two document templates by matching

fields in a document template with fields in another document template, and then using the data in the matched fields in the first template to populate the matched fields in the second document template. (Col. 3, lines 49-56). In a similar contrasting view, Kanevsky teaches organizing viewing material associated with web sites for visual displays and windows on and within which the web pages are being viewed. As such, the Examiner relied on Bickmore to obviate a system for making modifications to the document to adapt the document for display on a device other than an originally intended device and for applying pattern recognition and weighting heuristics on the document tree to produce a normalized document tree, as in the present claims.

However, Bickmore fails to makeup for the shortcomings of Chen and Kanevsky. Bickmore teaches a method for transforming a document into linked subdocuments that each requires less display area. (Col. 3, lines 64-67). Bickmore discloses that the re-authoring method can only be applied to certain displays since the method sometimes only returns a small portion of a page that is navigable. (Col. 4, lines 45-64). In contrast, the present invention normalizes any document for display on a device regardless of limitations of the device.

Bickmore teaches a document re-authoring method that is an iterative process. A document is iteratively reduced in size, so that at every step in the process, the most-promising state of the document, i.e., the state with the smallest current display area requirements, is selected and a transformation is applied to transform the document from its current state to a more promising state of the document, if possible. As soon as a state is created that contains a document version that is 'good enough,' the process can be halted and that version of the document is returned to the client device for rendering. Alternatively, the process is continued until all content of the original page is contained or represented in a set of good-enough subpages. If the process is exhausted and no document version can be found that is good enough,

then the best document found during the search is returned to the client device for rendering. If there are hard size constraints that are not met by the best document, a more destructive transformation is applied that breaks documents up in the middle of paragraphs. (Col. 10, lines 38-54). In contrast, the present invention does not involve any iterative re-authoring process.

Bickmore teaches that the re-authoring method uses heuristic information including the order in which various transformation techniques are applied to a state, the pre-conditions for each transformation technique, and the determination of when a document version or subpage is 'good enough.' (Col. 11, lines 1-10). The document re-authoring method re-authors a document by first parsing the document and constructing a parse tree or abstract syntax tree representation of the document. Each of the tree nodes are labeled with a unique identifier. Then a series of transformations are applied to the parse tree, and subsequently, each resulting transformed parse tree is mapped back into a document representation. (Col. 11, line 60 – Col. 12, line 2).

Bickmore teaches that document transforms are implemented using a standard procedure that includes three types of transforms 1) those that are always run on a page before the planning process starts; 2) those used in the best-first planning process; and 3) those that are always run on a page before it is translated from the final abstract syntax tree back into a surface form such as HTML. (Col. 12, lines 3-15). The transformations manipulate the document tree in order to produce a new version of the document. Bickmore teaches that the manipulations are similar to those described in S. Bonhomme et al., "Interactively Restructuring HTML Documents", Fifth International World Wide Web Conference, Paris, France, May 1996. (Col. 12, lines 16-26). However, Bickmore does not describe any of the transformations in detail.

Bickmore teaches that nodes of a syntax tree relating to a document are labeled with a unique identifier. However, Applicants submit that Bickmore does not teach or suggest

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"information content [being] organized into a set of hierarchical nodes having respective weights, where a weight determines whether a node will be inserted into a normalized document as a folder title or folder contents, and wherein the automatic normalizer folderizes the information content by identifying content having a higher visibility on a display of the originally intended device and assigning the content having the higher visibility a weight indicative of a folder title," as in claim 1 and similarly in claims 16, 20 and 27. Bickmore simply does not describe any document transformations in detail, as recited in the present claims.

Further, claim 27 includes "determining parent-child relationships between the weighted nodes based on the weighted nodes to produce a normalized document tree, wherein a weighted node is established as a child of a parent having the lightest weight of all the parents that is also greater than the weight of the weighted node." Bickmore does not teach or suggest determining parent-child relationships of nodes in this manner.

Further, claim 16 includes "if a node has no effect on a visual display of the information content and the node is not folder contents, the node is removed." The Examiner asserted that Bickmore teaches removing nodes at Col. 6, lines 30-50, because according to a broadest reasonable interpretation of what is claimed, Bickmore's teachings of transformation vs. elision techniques teach elimination of a node. Applicants disagree. While Bickmore discusses elision techniques that "basically remove some information, leaving everything else untouched," at Col. 6, lines 35-37, Bickmore does not teach or suggest "wherein if a node has no effect on a visual display of the information content and the node is not folder contents, the node is removed." The teachings in Bickmore are not directed toward specific applications of elision techniques.

Further, claim 20 includes "wherein a folder can be expanded to display information content, and wherein unexpanded folders are displayed along with expanded folders." In

contrast, Bickmore teaches that a document is converted into a list of section pages so that each section is elided into a page and each section header is converted into a hypertext link. When the hypertext link for any section is selected, the corresponding page of elided content is loaded into the browser. (Fig. 1 and Col. 8, lines 17-33). Thus, after selecting a link, a new page is loaded that only contains a title having that link, as shown in Figure 1. In contrast, claim 20 recites "wherein a folder can be expanded to display information content, and wherein unexpanded folder titles are displayed along with the information content of the expanded folders."

B.   Claims 23 and 39

Applicants submit that neither Chen, Kanevsky nor Bickmore teach or suggest a method for normalizing information content in a document including utilizing normalization markup in the information content to normalize the information content, "wherein the normalization markup provide at least one specific instruction for normalizing the information content," as in claim 23 and similarly in claim 39 and similarly within dependent claims 6-11.

With respect to dependent claims 6-11, the Examiner asserted that Chen discloses an XML document (meta-tags language) and generates a document object tree. However, Chen does not teach "wherein the normalization markup provide at least one specific instruction for normalizing the information content," as in the present claims. Chen does not teach that content is modified based on instructions provided by meta-tag language within the XML document.

C.   Claim 31

Applicants submit that neither Chen, Kanevsky nor Bickmore teach or suggest a method for generating a document object tree including "separate arrays [used] to store values representing properties of each node including properties selected from the group consisting of a parent node, a previous sibling node, a next sibling node, and a first child node," as in claim 31

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and similarly in dependent claim 34. With respect to claim 34, the Examiner asserted that Chen describes arrays to hold values that represent properties of the document tree. However, the section cited by the Examiner only teaches parsing an input document into a name tag and value pairs in a node tree format or an array format. Chen does not teach or suggest storing values representing properties of each node including "properties selected from the group consisting of a parent node, a previous sibling node, a next sibling node, and a first child node," as in claim 31.

Since the combination of Chen, Kanevsky and Bickmore does not teach or suggest all the claim limitations of any of independent claims 1, 16, 20, 23, 27, 31 or 39, the combination of Chen, Kanevsky and Bickmore does not obviate claims 1-40.

III.   Response to Rejection of Dependent Claims

Claims 2-15, 17-19, 21-22, 24-26, 28-30, 32-38 and 40 each are non-obvious based on the combination of Chen, Kanevsky and Bickmore for at least the reasons discussed above. Applicants also added new claims 41-43, which are non-obvious in view of the cited combination for at least the reasons discussed above with respect to claims 16, 20 and 27.

IV.   Conclusion

Applicants respectively submit that, in view of the remarks above, all of the pending claims are in condition for allowance. Applicants therefore respectfully request such action. The Examiner is invited to call the undersigned at (312) 913-3331 with any questions or comments.
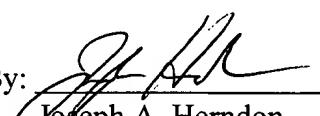
Respectfully submitted,

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